North Park Master Leasing Plan – Specific recommendations to be detailed and adopted in the Kremmling Resource Management Plan

The BLM proposed the North Park Master Leasing Plan (MLP) to solve or prevent conflicts between the interest in oil and gas development and protecting other resources and uses, such as greater sage-grouse habitat. *See map of MLP boundary attached as Exhibit 1*. The BLM further identified the North Park MLP as suitable for additional analysis in this plan. We strongly disagree with the agency's determination in the Draft Resource Management Plan (RMP) that the North Park MLP does not meet the criteria set out in IM 2010-117 – for instance, concluding that an area that is 70% unleased is not "substantially unleased" is not reasonable[1], especially when many of these leases are set to expire in immediate future and decisions regarding future leasing will have a critical effect on management of the many resources in the Kremmling Field Office. *See map of projected lease expiration attached as Exhibit 2*. Nonetheless, BLM retains the discretion under IM 2010-117 to prepare an MLP and, given the potential for 1) conflict, 2) the recent recommendations of the BLM's National Technical Team to prepare an MLP in priority greater-sage-grouse habitat, and 3) the other important resources at stake, the BLM should incorporate the North Park MLP into the Kremmling RMP by setting out more specific prescriptions for this area.

A thoughtful approach to the configuration of oil and gas development across the landscape is critical for resource protection. As explained in IM 2010-117 and the Colorado Leasing Strategy, the location and density of development needs to be planned in advance and at the landscape level to avoid and minimize impacts on both natural and cultural resources. The importance and complexity of using the best available science to plan at the landscape scale has been recognized by many scientists (Szaro et al. 2005, Noss 2007). Many ecological functions such as the seasonal migrations of wildlife, connectivity required to prevent genetic isolation, and natural disturbances affecting wildlife habitat occur across broad landscapes. The proposed North Park MLP includes priority greater sage-grouse habitat, important big game habitat, and valuable riparian resources. These resources must be protected by considering cumulative impacts on both public and private lands before leasing and/or drilling.

BLM recently issued Instruction Memorandum (IM) 2012-044, which sets out the agency's greater sage-grouse land use planning strategy. Attachment 1 to IM 2012-044 identifies the recommended conservation measures from the National Technical Team, including with respect to oil and gas development. Under the IM:

> …these conservation measures must be subjected to a hard look analysis as part of the planning and NEPA processes. This means that a reasonable range of conservation measures must be considered in the land use planning alternatives. As appropriate, the conservation measures must be considered and incorporated into at least one alternative in the land use planning process.

Accordingly, the Kremmling RMP should consider the conservation measures set out by the National Technical Team and incorporate them, which can best be accomplished through the North Park MLP.

[1] Draft RMP, p. 2-19. Even with the narrowed focus on just unleased BLM lands, 47% of these lands are unleased (Appendix V, p. V-3), which is certainly substantial, such that an MLP could substantially affect leasing and development in the area.

For leases issued in priority sage-grouse habitat, the National Technical Team specifically recommends the use of master leasing plans. IM 2012-044, Attachment 1, p. 23. The National Technical Team acknowledges that: "given impacts of large scale disturbances described above that occur across seasons and impact all demographic rates, applying NSO or other buffers around leks at any distance is unlikely to be effective." Id., p. 20. The National Technical Team concluded that:

> the conservation strategy most likely to meet the objective of maintaining or increasing sage-grouse distribution and abundance is to exclude energy development and other large scale disturbances from priority habitats, and where valid existing rights exist, minimize those impacts by keeping disturbances to 1 per section with direct surface disturbance impacts held to 3% of the area or less. IM 2012-044, Attachment 1, p. 21.

We recommend a two-step approach for protecting wilderness quality lands, sage-grouse and other wildlife habitat, and riparian resources. First, lands that deserve full protection from oil and gas development should be identified and mapped and closed to leasing and development[2]. Second, lands where development is allowed but impacts must be minimized through clustered and phased development should also be identified and mapped.[3] Please note that the landscape level recommendations in this section are additive and do not replace recommendations for local NSO, buffers or other for individual species recommendations listed at the end of this section.

A. Lands Excluded from Oil and Gas Development

Within the proposed North Park MLP area, lands that should be removed from consideration for oil and gas development include lands identified as having wilderness characteristics and priority greater sage-grouse habitat. Both resources are identified in the Draft RMP, Chapter 3. The BLM evaluated four areas to determine their wilderness character; in Alternative C, the Kremmling RMP would manage three areas totaling approximately 16,000 acres to protect their wilderness characteristics. Draft RMP, p. 3-133. These lands constitute a tiny fraction of both the proposed MLP area and the planning area. It is important to protect these areas from oil and gas development to preserve these few lands that still harbor wilderness character for both the ecological values and the cultural importance of these lands. The BLM has acknowledged that activities such as oil and gas development will damage wilderness characteristics. Draft RMP, p. 4-358. Protecting these areas as part of the North Park MLP will also provide protection for wildlife and riparian resources. *See*, Draft RMP, pp. 4-173, 4-74.

Further, as the BLM's National Technical Team has recommended, oil and gas development should not be permitted in priority sage-grouse habitat and expired or terminated leases should not be available for future leasing. Since unitization can hold leases that are set to expire "in production" based on the

[2] The BLM recently proposed such an approach for the Beaver Rim MLP area in the Lander Field Office. *See* Lander Draft RMP and EIS at 81 (proposing to "[m]ake parcels in the Beaver Rim area available for lease starting in the CSU areas outside of crucial winter range. Allow no more than 5 percent surface disturbance in the township in which the parcel is located until interim reclamation goals are achieved. Require co-location of new disturbance if technically feasible. New disturbances must be at least 1.2 miles from existing disturbance.").

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production on one or more leases in the unit, the application for unitization should be scrutinized for potential impact to sage-grouse habitat as well as riparian resources.

B. Lands Where Oil and Gas Development Impacts are Minimized

The Draft RMP would also protect areas of critical environmental concern, including research natural areas and outstanding natural areas from the effects of oil and gas development, stating that all alternatives will:

> Prohibit surface occupancy or use in ACECs, RNAs, and ONAs in order to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect human life and safety from natural hazards. (See Appendix B.) Draft RMP, p. 2-68.

Many of the ACECs and other specially designated areas in the Kremmling planning area are encompassed in the North Park MLP boundary (Map 2-52), including the North Park Natural Area ACEC that is designated to protect the North Park Phacelia, a federally listed species. As shown on Map 2-52 in the RMP, these areas are a small percentage of the lands in the MLP, but incorporating them in the North Park MLP would reinforce the need for a landscape level approach to better manage these areas in the context of surrounding uses.

On the remainder of the lands in the North Park MLP area, BLM should implement measures to configure oil and gas development to minimize impacts on greater sage-grouse and big game species (mule deer, elk, moose and pronghorn). All habitats for these species should be included in this category because of the sensitivity of these species to disturbance from oil and gas development, the value big game species bring to the region, and the imperiled status of the greater sage-grouse.

Currently the draft stipulations in Appendix C include time limitations stipulations on specific habitats (parturition, critical winter range, and lambing) for different big game species. Management recommendations from the Wyoming Game and Fish Department (2004) state that "Although seasonal restrictions are intended to protect specific habitats (e.g. winter and reproductive habitats) and species (e.g. pronghorn, mule deer, elk, sage grouse) at critical times of the year, they generally have been most effective during the exploration and drilling phases of oil field development. However, oil and gas operations also disturb and displace wildlife through the production phase (up to 40 years and longer.)"[4] Colorado BLM has also recognized the ineffectiveness of "traditional timing limitations."[5]

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[4] To address wildlife impacts from oil and gas production, the Lander Field Office has proposed to apply "wildlife seasonal protections . . . to maintenance and operations actions when the activity is determined to be detrimental to wildlife. . . ." Lander Draft RMP and EIS at 98.

[5] White River Field Office, EA for the May 2012 Oil and Gas Lease Sale at 38 (Dec. 2011) ("Traditional timing limitations continue to be applied to these important summer and winter (i.e., severe winter and critical winter) ranges by the State and BLM, although these measures were not designed or intended to deal effectively with new drilling and completion technologies (e.g., deep directional, multi-well pads) and the disposal of large quantities of produced fluids. . . . [Sawyer's] studies provide compelling evidence that behavioral impacts (habitat disuse from avoidance, elevated energetic demands) associated with human and vehicular activity attributable to oil and gas development are the primary impact imposed on big game and are, in these circumstances, more expansive and deleterious than direct habitat loss associated with longer term infrastructure occupation and shorter term vegetation modifications.), *available at* http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/white_river_field/completed_2012_documents.Par.85739.File.dat/doiblmco11020110178ea_public%20review%20draft%2012_1_12.pdf.

In the area defined by the habitat boundaries of these five species, guidelines for development should be followed to insure clustering of infrastructure and phasing of development over time. Guidelines need to be based on the best available science, particularly information derived from field studies measuring impacts on big game and greater sage-grouse from disturbance caused by roads, oil and gas development and other anthropogenic sources. Management guidance must steer development to: 1) maintain the largest possible areas of intact wildlife habitat; 2) minimize the direct impacts through steps such as angular drilling, using multiple wells per pad, and utilizing shared infrastructure; and 3) minimize indirect and cumulative impacts by enforcing clustering and phasing of development over time. The following guidelines should be a part of the guidelines for clustered and phased development for all big game habitats:

1. Develop oil and gas in clusters of well pads and required infrastructure. New development should be located near existing infrastructure (well pads, roads, pipelines, and other utilities). Identify areas for focused development. Limit the overall *number* and *size* of these clusters of development in order to maximize intact habitat in between them. Do not develop a cluster of well pads across a migratory corridor.[6]

2. Limit development density within clusters to 1 pad per square mile. This well pad density roughly equates to road densities in an oil or gas field of approximately 1 mile per square mile and a 1 percent direct surface disturbance from roads and pads (Wilbert et al, 2008). This is the same road density already identified in the Draft LMP for road densities in watersheds with important wildlife habitats:

> "Where motorized route densities in key wildlife habitat exceed 1 mile per square mile, management actions should be considered that maintain habitat effectiveness supporting limiting life functions. Key wildlife habitat may include severe big game winter range and concentration areas, kidding and lambing areas, calving and fawning areas, and migration corridors. Travel management actions considered may include seasonal travel restrictions, partial or complete route closures, and new route alignments (or the realignment of existing routes in order to avoid key wildlife habitat)."[7]

Field biologists measure changes in elk habitat effectiveness caused by the density of roads across a landscape rather than simply the number of miles of road. Road densities of 1 mile per square mile were found to reduce elk habitat effectiveness by 25% in forested landscape and to nearly eliminate habitat effectiveness in open landscapes (Lyon 1979, Lyon 1983). This means even at this density of one pad per square mile we are sacrificing habitat effectiveness and must insure large regions of intact habitat outside of development clusters.

Similarly for greater sage-grouse, the BLM's National Technical Team recommends a maximum of one disturbance per section with direct surface impacts limited to 3% of the area or less. IM 2012-044, Attachment 1, p. 21.

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[6] Researchers recommend that distribution of oil and gas development should not coincide with or sever migratory routes (Sawyer et al. 2005, Berger 2004). Wyoming Game and Fish Department (2004) states "Long-term displacement of wildlife from preferred habitats and disruption of migration routes could, in the extreme case eliminate "migration memory" that required several thousand years to evolve. . . . Extended disruptions of migration or habitat use can result in loss of learned behavior from entire cohorts of young animals, breaking the tradition of migration to the most suitable winter habitats."

[7] Draft LMP at 275.

3. Do not develop in between identified clusters to insure large regions of intact wildlife habitat. The many pieces of literature cited at the top of this section document the negative impacts of fragmentation from roads and well pads. Wyoming Game and Fish Department (2004) states that "As densities of wells, roads, and facilities increase, the effectiveness of adjacent habitats can decrease until most animals no longer use the habitat." Clustering development is the most effective way to insure he maintenance of large patches of undeveloped habitat required by big game species.

4. Phase oil and gas development over time as well pads and roads are reclaimed. Once the maximum number, size and density of clusters have been reached, reclamation must be conducted before allowing the development of additional well pads within a cluster or additional clusters of development. The Colorado Leasing Strategy identifies "phased development," "caps on new surface disturbance, pending acceptable interim or final reclamation," and "final reclamation restoring the landform and native plant community" as appropriate planning decisions in MLPs to protect resources including wildlife.

We recommend careful consideration of what is considered to be "reclaimed," and consequently the allowance of further development. Quickly reestablishing vegetative cover is not the same as the much longer process of establishing vegetation to support ongoing ecosystem functions and services. In areas of sagebrush habitat we recommend active restoration to reestablish compositional and structural elements important to the survival of sagebrush obligate species. Emphasis should be placed on the restoration of *functional* habitats and *connection* of habitats. Clearly define what constitutes reclamation for each habitat type and ensure that this fits in to broader, scientifically-sound restoration efforts. If the quality of revegetation is monitored and functional criteria applied to sagebrush habitat, best management practices for creating the pad will be encouraged. It is notoriously difficult to reestablish sagebrush once it has been removed. The best management practice of sagebrush mowing and application of mats (where topography allows), rather than denuding the pad of all vegetation, will speed recovery of sagebrush after the mats (pads) are removed

5. Monitor oil and gas development annually to 1) insure development is constrained to predetermined cluster boundaries and that development densities do not exceed 1 well pad per square mile within clusters, 2) document areas that are reclaimed, and 3) identify negative impacts on big game species. As stated in the Colorado Leasing Strategy: "Every field office will assess environmental impacts from oil and gas development and evaluate whether existing protection measures are effective in achieving their desired intent. BLM Colorado will use Adaptive Management principles, incorporate the best available science, and address changing resource conditions when considering lease stipulation exceptions, waivers, and modifications." The best management plan may be highly ineffective without monitoring. This last step is critical to effective implementation of the management plan.

C. Additional Specific Recommendations for Greater Sage-grouse

In addition to protecting priority habitat from new leasing, the BLM's National Technical Team has provided specific conservation recommendations for areas that are leased and will be developed. IM 2012-044, Attachment 1, pp. 22-24. These measures should be incorporated as management for the North Park MLP:

Leased Federal Fluid Mineral Estate

<u>Priority sage-grouse habitat areas</u> (with varying levels of exploration & development)

Apply the following conservation measures through Resource Management Plan (RMP) implementation decisions (e.g., approval of an Application for Permit to Drill, Sundry Notice, etc.) and upon completion of the environmental record of review (43 CFR 3162.5), including appropriate documentation of compliance with NEPA. In this process evaluate, among other things:
1. Whether the conservation measure is "reasonable" (43 CFR 3101.1-2) with the valid existing rights; and
2. Whether the action is in conformance with the approved RMP.

Provide the following conservation measures as terms and conditions of the approved RMP:

- Do not allow new surface occupancy on federal leases within priority habitats, this includes winter concentration areas (Doherty et al. 2008, Carpenter et al. 2010) during any time of the year.
  Consider an exception:
  - If the lease is entirely within priority habitats, apply a 4-mile NSO around the lek, and limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section.
  - If the entire lease is within the 4-mile lek perimeter, limit permitted disturbances to 1 per section with no more than 3% surface disturbance in that section. Require any development to be placed at the most distal part of the lease from the lek, or, depending on topography and other habitat aspects, in an area that is less demonstrably harmful to sage-grouse.
- Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season in all priority sage-grouse habitat during this period.
- Do not use Categorical Exclusions (CXs) including under the Energy Policy Act of 2005, Section 390 in priority sage-grouse habitats due to resource conflicts.
- Complete Master Development Plans in lieu of Application for Permit to Drill (APD)-by-APD processing for all wells.
- When permitting APDs on existing leases that are not yet developed, the proposed surface disturbance cannot exceed 3% for that area.
  Consider an exception if:
  - Additional, effective mitigation is demonstrated to offset the resulting loss of sage-grouse (see Objectives).
    - When necessary, conduct additional, effective mitigation in 1) priority sage-grouse habitat areas or – less preferably – 2) general sage-grouse habitat (dependent upon the area-specific ability to increase sage-grouse populations).
    - Conduct additional, effective mitigation first within the same population area where the impact is realized, and if not possible then conduct mitigation within the same Management Zone as the impact, per 2006 WAFWA Strategy – p. 2-17.
- Require unitization when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts to sage-grouse according to the Federal Lease Form, 3100-11, Sections 4 and 6.
- Identify areas where acquisitions (including subsurface mineral rights) or conservation easements, would benefit sage-grouse habitat.
- Require a full reclamation bond specific to the site. Insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000, Hagen et al. 2007) that would result in full restoration. Base the reclamation costs on the assumption that contractors for the BLM will perform the work.

- Make applicable Best Management Practices (BMPs, see Appendix D) mandatory as Conditions of Approval within priority sage-grouse habitat.

D. Additional Specific Recommendations for Riparian Resources

Riparian resources, including the habitat and water resources they help to protect, should also be mapped and protected in the MLP. The Draft RMP includes stipulations prohibiting surface occupancy and surface-disturbing activities within 2,500 feet of either side of the high-water mark along 5 major river corridors. Draft RMP, p. 2-41. However, perennial streams, water bodies, fisheries and riparian areas receive less protection: Perennial streams are subject to an NSO buffer of 325 horizontal feet and may be subject to additional surface use restrictions from 325 to 500 horizontal feet in Alternatives B and C. Draft RMP, pp. 2-41 – 2-42. Intermittent and ephemeral streams are only provided with protection in Alternative C through a prohibition on surface occupancy or use within 50 horizontal feet and minimizing roads, crossings and facilities within 100 horizontal feet beyond that buffer.

The Draft RMP acknowledges that the energy development activities will have adverse impacts on riparian resources, including the preferred alternative, which would have "moderate impacts to water resources where they occur in proximity to hydrologic features." *See*, Draft RMP, pp. 4-71 – 4-72. These impacts can and should be addressed through stronger protections from the known damage caused by oil and gas development activities. Wetlands and riparian corridors should be subject to a .25 mile NSO stipulation[8]. In addition, the Colorado Natural Heritage Program conducted field work and, in January 2010, generated proposed conservation areas (PCAs). *Map attached as Exhibit 3*. These proposed PCAs overlay with important wetlands and should be protected by NSO stipulations, as well, for federal minerals. A second CNHP study of wetlands (final report due Apr 2012) in the North Platte headwaters (all of Jackson County) surveyed the status of 95 randomly selected wetland sites of approximately 1 acre (excluding wetlands managed for hay production). In that survey the scientist identified close to 600 species of plants. That is approximately 20% of all known species (close to 3000) of plants in the entire state of Colorado over all land cover types. This finding is a testament to the diversity of wetland plant communities in Jackson County and underlines the importance of protection.

In addition, river otters have colonized tributaries of the North Platte and are identified as a state listed species and as a BLM priority species. Draft RMP, p. 3-68. *See also*, *map attached as Exhibit 4*. However, there are no specific provisions in the Draft RMP specifically tailored to protect otter habitat. Protecting riparian resources would also provide much-needed protection for river otters, as well.

[8] This stipulation was applied in the final RMP for the Little Snake Field Office.